

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID P. ASCHENBECK and MICHAEL T. PELLEGRIN

Appeal No. 1998-0241
Application No. 08/465,373

ON BRIEF

Before CALVERT, PATE and BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1, 2, 4, 6 and 8-11. In the final rejection (Paper No. 7), claims 12 and 20-22 were indicated as allowable, claim 5 was objected to as being dependent on a rejected base claim and claims 1-4 and 6-11 were rejected. Subsequent to the final rejection, claims 1 and 3 were amended and claim 7

was canceled (see Paper No. 9). Consequently, claims 1, 2, 4, 6 and 8-11 stand rejected, claims 3 and 5 stand objected to as being dependent on a rejected base claim and claims 12 and 20-22 stand allowed. Claims 13-19 were canceled prior to the final rejection.

BACKGROUND

The appellants' invention relates to a method of distributing fibers by applying low frequency sound. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced in the opinion section of this decision, infra.

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

McCardell Troth, Jr. (Troth)	3,477,103	Nov. 11, 1969
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The following rejections are before us for review.¹

1. Claim 10 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as the invention.
2. Claims 1, 2, 4, 6, 9 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Troth.

¹ The rejection of claim 3 under 35 U.S.C. § 112, second paragraph, was overcome by the amendment in Paper No. 9 (see advisory action, Paper No. 10).

3. Claims 8 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Troth.²

Reference is made to the brief³ (Paper No. 18) and the final rejection and answer (Paper Nos. 7 and 19) for the respective positions of the appellants and the examiner with regard to the merits of these rejections.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art reference, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

² We interpret the last sentence on page 2 of the answer (Paper No. 19) as a statement that the 35 U.S.C. § 103 rejection of claims 1, 2, 4 and 8-11 set forth in the final rejection (Paper No. 7, page 4) is withdrawn as to claims 1, 2, 4, 9 and 10. Based on the record as a whole, it is apparent to us that the examiner's statement, on page 3 of the answer, "[s]ome dependent claims are still rejected under 35 U.S.C. § 103, but since the claims stand or fall together, the rejection is not an issue" indicates that dependent claims 8 and 11 remain rejected under 35 U.S.C. § 103 as being unpatentable over Troth for the reasons cited on page 4 of the final rejection. The examiner's omission of this rejection in the Grounds of Rejection section of the answer appears to us to be based on the examiner's mistaken impression that it is not necessary to explicitly restate in the answer rejections of dependent claims which are not separately argued apart from the independent claim from which they depend. In any event, as the appellants' brief (Paper No. 18, page 4) identifies the patentability of claims 8 and 11 under 35 U.S.C. § 103 as an issue in this appeal, the appellants would not appear to be prejudiced by our interpretation.

³ All references to the brief in this decision allude to the substitute brief filed July 21, 1997 (Paper No. 18).

The indefiniteness rejection

The second paragraph of 35 U.S.C. § 112 requires that claims define the metes and bounds of a claimed invention with a reasonable degree of precision and particularity. See In re Venezia, 530 F.2d 956, 958, 189 USPQ 149, 151 (CCPA 1976).

In rejecting claim 10 under the second paragraph of 35 U.S.C. § 112, the examiner's position is that the metes and bounds of the term "irregularly shaped" are not clear. In particular, the examiner questions whether "irregularly shaped" requires that the fiber be made of two compositions and urges that such a definition would be contrary to any ordinary and customary usage of this terminology⁴ (answer, page 4). The term "irregular" is generally understood to mean not conforming to established rule; not straight or even; not uniform in shape, design or proportion or uneven in occurrence or succession (Webster's New World Dictionary, Third College Edition (Simon & Schuster, Inc. 1988)). In order to determine, within the context of the appellants' invention, what types of fibers fall within the scope of "irregularly shaped," we have reviewed the appellants' specification for guidance as to the definitions of regularly shaped and irregularly shaped.

The appellants' specification, on pages 12 and 13, states that the present invention is preferably practiced with long, "irregularly shaped fibers, such as the bi-component glass fibers

⁴ We, like the examiner, observe that the phrase "irregularly shaped" would not, in accordance with the ordinary and customary usage of these terms, convey or imply any limitation as to composition.

and related fiberizing techniques disclosed in [U.S. Patent No. 5,431,992 issued to Houpt et al. on July 11, 1995]." The Houpt et al. patent (column 7, lines 38-43) teaches that

[a]n irregularly shaped fiber of the invention differs from a helical fiber in that the rotation of the fiber is not constant, but rather varies irregularly both in direction (clockwise and counterclockwise) and in magnitude. The magnitude of rotation of a fiber is how fast the fiber rotates per unit length of the fiber.

As disclosed in column 7, lines 17-37 and 57-64, the irregularly shaped fibers of the Houpt et al. patent are produced by forming each fiber of two different glass compositions each having a different coefficient of thermal expansion, thereby causing the fiber to curve as it cools. If no rotation of the fiber is introduced during cooling, a flat coil having a constant radius of curvature will be produced. In a continuously changing attenuation environment, each dual-glass fiber is twisted in a unique way. The fiber's final shape is one with a baseline curvature due to the dual-glass nature, which is modified by the twisting, irregular rotation of the plane of curvature caused by the continuously changing or stochastic attenuation environment.

The appellants' specification has been amended (Paper No. 9) by insertion of the following language on page 13:⁵

An irregularly shaped glass fiber 122 is shown in Figure 7, where the shadow 124 of the irregularly shaped fiber cast from an overhead light onto a flat surface has been added. The irregularly shaped glass fiber comprises two distinct glass compositions with different coefficients of thermal expansion. An irregularly shaped glass fiber has a rotation which is constant, but varies irregularly both in

⁵ We also note that the appellants have filed a request for drawing correction (Paper No. 14) to add new drawing Figures 6 and 7. It is not clear from the file record whether the examiner has approved entry of these drawings. We leave this to be resolved by the examiner, in the event of further prosecution.

direction and in magnitude. The direction of rotation of the fiber can be either clockwise or counterclockwise. The magnitude of rotation is a measure of how much the fiber rotates per unit length of the fiber.

While it appears that an "irregularly shaped" glass fiber as used in claim 10 must have a magnitude of rotation which is not constant, but varies both in direction and magnitude along the length of the fiber, we do not agree with the appellants' argument on page 5 of the brief that "[t]he language of the specification clearly states that an irregularly shaped glass fiber comprises two distinct glass compositions with different coefficients of thermal expansion."⁶ Rather, it is not clear whether "irregularly shaped" glass fiber also requires that the fiber be a dual-glass fiber or whether this is merely one example of an "irregularly shaped" glass fiber. Therefore, we find ourselves in agreement with the examiner that the phrase "irregularly shaped" is indefinite.

For the foregoing reasons, we shall sustain the examiner's rejection of claim 10 under the second paragraph of 35 U.S.C. § 112.

The anticipation rejection

With regard to the examiner's rejection of claims 1, 2, 4, 6, 9 and 10 under 35 U.S.C. § 102(b) as being anticipated by Troth, the appellants' brief (pages 4 and 6-8) argues only claim 6 separately from claim 1. Accordingly, we shall decide the appeal of this rejection as to claims 1, 2, 4, 9 and 10 on the basis of representative claim 1, with claims 2, 4, 9 and 10

⁶ Interestingly, the appellants have not argued, with respect to the rejection of claim 10 under 35 U.S.C. § 102(b) as being anticipated by Troth, that the fibers of Troth are not "irregularly shaped."

standing or falling therewith. See In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); In re Wood, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978). We shall decide the appeal of this rejection separately as to claim 6.

We direct our attention first to claim 1, which reads as follows:

1. A method of distributing fibers comprising producing fibers with a fiberizing apparatus, causing said fibers to travel in a generally downward direction, applying low frequency sound having a frequency less than about 30 cycles per second to at least one portion of said fibers to cause said at least one portion of said fibers to deviate in its direction of travel.

Troth discloses a method comprising producing fibers 1, forwarding the fibers in a downward direction by means of slot jet devices 2 and deflecting the fibers alternately by opposed air streams issuing from deflection gaps 5, 6 supplied by plenums 7, 8, 9, 10. The plenums are connected through manifolds and transfer lines to compressed air supplies governed by rotary valves having variable speed drives that alternately provide air to the opposing plenums at a minimum deflection frequency of 1.9 to 15.3 cycles per second (column 5, lines 35-37).

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention.

Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). It is not necessary that the reference teach what the subject application teaches, but only that the claim read on something disclosed in the reference, i.e., that all of the limitations in the claim be found in or fully met by the reference. Kalman v. Kimberly Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

With regard to whether Troth anticipates claim 1, the only issue in dispute is whether the application of the deflection air streams of Troth meets the claimed step of applying low frequency sound to at least one portion of said fibers to cause the at least one portion of said fibers to deviate in its direction of travel. The examiner asserts that, while Troth does not use the term sound, the air streams do meet the definition of sound (answer, pages 6 and 7).

In proceedings before it, the PTO applies to the verbiage of claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification. In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). Moreover, an applicant can be his own lexicographer provided the applicant's definition, to the extent it differs from the conventional definition, is clearly set forth in the specification.

Beachcombers Int'l, Inc. v. WildeWood Creative Prods., Inc., 31 F.3d 1154, 1158, 31 USPQ2d 1653, 1656 (Fed. Cir. 1994). On the other hand, limitations are not to be read into the claims from the specification. In re Van Geuns, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) citing In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

The term "sound" is broadly defined as "an alteration of properties of an elastic medium, such as pressure, particle displacement, or density, that propagates through the medium, or a superposition of such alterations" (Dictionary of Scientific and Technical Terms, Second Edition (McGraw-Hill 1978)). While the appellants' specification discloses a particular sound application wherein the sound is produced using a resonator tube, the specification does not clearly set forth a definition of "sound" which differs from the conventional definition set forth above. Accordingly, we agree with the examiner that the step in Troth's method of periodically applying deflection air streams, whereby, as described by the appellants (brief, page 7), "the fibers are deflected by the action of air or other fluids which are periodically moved toward the fibers so that they impinge on the fibers," meets the broad definition of "sound."⁷ We see nothing in the appellants' specification which defines "sound" so as to preclude propagation of pressure or particle displacement produced by a fluid stream.

⁷ This panel reached the same conclusion with regard to this issue in the related appeal in application No. 08/236,067 (appeal No. 97-2328), in which a decision affirming the examiner's prior art rejections was mailed on May 26, 1999.

Therefore, we shall sustain the examiner's rejection of claim 1 and claims 2, 4, 9 and 10 which stand or fall therewith under 35 U.S.C. § 102(b).

We shall not, however, sustain the examiner's rejection of claim 6, which requires that the step of applying sound comprises applying low frequency sound at locations on opposite sides of the veil "in a vertically offset relationship." With regard to this limitation, the examiner finds that the locations of the deflection gaps "are in vertically offset relationship with the fiberizer" (final rejection, page 3). From our perspective, the language "in a vertically offset relationship" as used in the claim would have been understood by one of ordinary skill in the art as requiring that the sound be applied at locations which are vertically offset from one another. The examiner's apparent interpretation of this language as merely requiring that the sound application locations be vertically offset relative to anything strikes us as unreasonable in this instance. As best seen in Figures 1 and 2, the deflection gaps 5, 6 of Troth are located on opposite sides of the ribbon of fibers 1, but they are not in vertically offset relationship with one another. Thus, it is our opinion that Troth fails to disclose all of the limitations of claim 6.

The obviousness rejection

The appellants' only argument with regard to the patentability of claims 8 and 11 relies on the assertion that Troth does not disclose the step of applying sound to a portion of the fibers to cause them to deviate from their path of travel. For the reasons discussed above with regard to the rejection of independent claim 1, we do not find this argument persuasive. Accordingly,

we shall also sustain the examiner's rejection of claims 8 and 11 as being unpatentable over Troth.

CONCLUSION

To summarize, the decision of the examiner to reject claim 10 under 35 U.S.C. § 112, second paragraph, claims 1, 2, 4, 9 and 10 under 35 U.S.C. § 102(b) and claims 8 and 11 under 35 U.S.C. § 103 is affirmed. The examiner's decision to reject claim 6 under 35 U.S.C. § 102(b) is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

IAN A. CALVERT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
WILLIAM F. PATE, III)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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Appeal No. 1998-0241
Application No. 08/465,373

Page 13

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